## LEYLAND-TRIUMPH SALES COMPANY, INC.





TO: ALL TRIUMPH DEALERS - WESTERN ZONE

DEPT: SERVICE DEPARTMENT BULLETIN T-66-40

SUBJECT: TESTING AND DIAGNOSING FAULTS ON

THE BI-METAL FUEL AND TEMPERATURE

CIRCUITS DATE: AUGUST 11, 1966

In an effort to simplify the testing of fuel and temperature gauges of the bi-metal type or slow-moving type as used on the TR-4, 4A, Spitfire and 2000 series, the following tester can be made up in your workshop in a matter of minutes.

As you are all aware, considerable time has surely been spent trying to decide which unit has been at fault in the case of incorrect fuel and temperature readings and in many cases, the entire system has been changed erroneously.

The first step should be to check the correct output of the voltage stabilizer which, in the case of the models previously mentioned, should be 10 volts. To do this accurately, the use of an ordinary Triumph TR-4 or Spitfire temperature gauge taken from stock will be most useful. Connect a 12 volt 2.2 watt bulb (dash illumination bulb) in series with the best gauge. This will introduce sufficient resistance in the circuit to allow the gauge to just read full scale when 12 volts is applied.

Next, connect the gauge to a 10 volt source. For example, to the "I" terminal of a known properly functioning stabilizer on a new car. Allow at least 2 minutes for the gauge to register and stabilize, then mark the front of the dial opposite the pointer. The gauge has now been calibrated to read 10 volts. If you have a suspected stabilizer to test, disconnect the lead from the "I" terminal on the stabilizer. Connect one end of your test gauge to the "I" terminal on the stabilizer, the other to ground, and after 2 minutes note the readings on the test gauge. This should read 10 volts if the stabilizer is in proper working order.

Incidentally, the bulb which is in series with the gauge will also serve as an indicator; and if the circuit is functioning properly, this bulb should glow for approximately 30 seconds and then commence flashing.

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Assuming the stabilizer is working properly, disconnect the temperature transmitter lead. The gauge on the car should now read `cold". If so, ground the same lead and the gauge should now read "hot". Proceed as above for checking fuel gauges with the exception that the wire connected to the tank unit will be disconnected and grounded respectively.

NOTE: THIS BULLETIN IS TO BE USED FOR TECHNICAL INFORMATION ONLY, AND DOES NOT CONSTITUTE AN AUTHORIZATION FOR REPAIRS.